UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/689,632	10/13/2000	Jean-Pierre Tahon	4907/Oconalign	8441

6858	7590	11/22/2004	EXAMINER

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ART UNIT	PAPER NUMBER
1772	

DATE MAILED: 11/22/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Advisory Action	**Application No.** 09/689,632	**Applicant(s)** TAHON ET AL.
	Examiner Sow-Fun Hon	**Art Unit** 1772

--The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

THE REPLY FILED 11/02/04 FAILS TO PLACE THIS APPLICATION IN CONDITION FOR ALLOWANCE. Therefore, further action by the applicant is required to avoid abandonment of this application. A proper reply to a final rejection under 37 CFR 1.113 may only be either: (1) a timely filed amendment which places the application in condition for allowance; (2) a timely filed Notice of Appeal (with appeal fee); or (3) a timely filed Request for Continued Examination (RCE) in compliance with 37 CFR 1.114.

<u>PERIOD FOR REPLY</u> [check either a) or b)]

a) ☒ The period for reply expires <u>5</u> months from the mailing date of the final rejection.

b) ☐ The period for reply expires on: (1) the mailing date of this Advisory Action, or (2) the date set forth in the final rejection, whichever is later. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of the final rejection. ONLY CHECK THIS BOX WHEN THE FIRST REPLY WAS FILED WITHIN TWO MONTHS OF THE FINAL REJECTION. See MPEP 706.07(f).

Extensions of time may be obtained under 37 CFR 1.136(a). The date on which the petition under 37 CFR 1.136(a) and the appropriate extension fee have been filed is the date for purposes of determining the period of extension and the corresponding amount of the fee. The appropriate extension fee under 37 CFR 1.17(a) is calculated from: (1) the expiration date of the shortened statutory period for reply originally set in the final Office action; or (2) as set forth in (b) above, if checked. Any reply received by the Office later than three months after the mailing date of the final rejection, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

1. ☐ A Notice of Appeal was filed on _____. Appellant's Brief must be filed within the period set forth in 37 CFR 1.192(a), or any extension thereof (37 CFR 1.191(d)), to avoid dismissal of the appeal.

2. ☐ The proposed amendment(s) will not be entered because:

    (a) ☐ they raise new issues that would require further consideration and/or search (see NOTE below);

    (b) ☐ they raise the issue of new matter (see Note below);

    (c) ☐ they are not deemed to place the application in better form for appeal by materially reducing or simplifying the issues for appeal; and/or

    (d) ☐ they present additional claims without canceling a corresponding number of finally rejected claims.

        NOTE: _____.

3. ☐ Applicant's reply has overcome the following rejection(s): _____.

4. ☐ Newly proposed or amended claim(s) _____ would be allowable if submitted in a separate, timely filed amendment canceling the non-allowable claim(s).

5. ☒ The a)☐ affidavit, b)☐ exhibit, or c)☒ request for reconsideration has been considered but does NOT place the application in condition for allowance because: <u>*See attachment to advisory action.*</u>

6. ☐ The affidavit or exhibit will NOT be considered because it is not directed SOLELY to issues which were newly raised by the Examiner in the final rejection.

7. ☒ For purposes of Appeal, the proposed amendment(s) a)☐ will not be entered or b)☒ will be entered and an explanation of how the new or amended claims would be rejected is provided below or appended.

    The status of the claim(s) is (or will be) as follows:

    Claim(s) allowed: *None*.

    Claim(s) objected to: *None*.

   Claim(s) rejected: <u>*4,5,7-12,14 and 17*</u>.

    Claim(s) withdrawn from consideration: *None*.

8. ☐ The drawing correction filed on _____ is a)☐ approved or b)☐ disapproved by the Examiner.

9. ☐ Note the attached Information Disclosure Statement(s)(PTO-1449) Paper No(s). _____.

10. ☐ Other: _____

Advisory Action

1.   The request for reconsideration has been entered and considered but does not overcome

the rejection for the reasons set forth below.

2.   Applicant argues that the primary reference Escher does not disclose polythiophenes

according to Applicant's claimed formula (I) in which R^1 and R^2 together form an $O-[C_1-C_4$

alkylene]-O group or an O-[cycloalkylene]-O group; and that although Escher had the option to

claim identical substituents for R^1 and R^2 in *formula (I)* of Escher, as for R^3 and R^4 in *formula (II)*

of Escher, the fact that Escher did not do so infers that they had reason to believe that the

polymers are outside the scope of *formula (I)* but within the scope of *formula (II)*.

Applicant is respectfully reminded that the mere disclosure of the electrically conducting

polymers of *formula (II)* right after *formula (I)* is indicative that *formula (II)* may be used as an

alternate in place of preferred *formula (I)*. Escher does not teach against the use of the

electrically conducting polymers of *formula (II)*. Instead, Escher teaches the use of *formula (II)*

wherein R^3 and R^4 are disclosed by DE-A 3,717,668 (column 2, lines 35-55) immediately after

formula (I). US 5,286,414 (Kämpf) is the US equivalent of DE-A 3,717,668. Kämpf teaches

that the polythiophene has the thiophene monomer formula below:
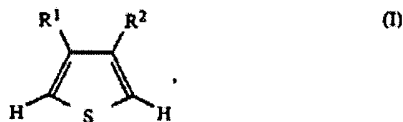
in which
  R^1 denotes a C_1-C_{12} alkoxy group or $-O(CH_{n2}C-H_2O)_nCH_3$ where n = 1 to 4 and
  R^2 denotes a hydrogen atom, a C_1-C_{12} alkyl group, a C_1-C_{12}-alkoxy group, or $-O(CH_2CH_2O)_nCH_3$ where n = 1 to 4, or
  R^1 together with R^2 represents $-O(CH_2)_m-CH_2-$ or $-O(CH_2)_m-O-$, in which m is 1 to 12.

wherein R^1 and R^2 occupy the same positions of Applicant's $-O-R^1$ and $-O-R^2$ of on the

thiophene ring. Kämpf teaches that R^1 and R^2 together represent $-O-(CH_2)_m-O-$ where m is 1 to

12 (column 2, lines 35-55), which encompasses the claimed limitation that Applicant's R^1 and R^2

together represent a C_1-C_4 alkylene group where m is 1 to 4.

The incorporation of DE-A 3,717,668 into the summary (not the background) of the

invention of Escher is motivation enough for one of ordinary skill in the art at the time the

invention was made, to refer to it for alternate derivatives of the electrically conductive

polythiophene used in the orienting layers.

3.   Applicant argues that Escher provides no suggestion or indication that polythiophenes,

other than those disclosed in *formula (I)* could also exhibit similar properties.

Applicant is respectfully reminded that Escher teaches the use of *formula (II)* wherein R^3

and R^4 are disclosed by DE-A 3,717,668 (column 2, lines 35-55) immediately after *formula (I)*,

as monomers from which electrically conductive polymers are derived (column 2, lines 35-55).

Therefore Escher does suggest that the polythiophenes disclosed in *formula (II)* could exhibit

similar properties as *formula (II)*.

4.   Applicant argues that while Applicant does not refute the fact that one skilled in the art

would look up these references, Applicant disputes what is in the teaching that one skilled in the

art would seek from these references since the fact that Escher failed to claim identical

substituents for R^1 and R^2 in *formula (I)* as for R^3 and R^4 in *formula (II)*, means that Escher had

reason to believe that the polymers derived from *formula (II)* did not function as orienting layers

in liquid crystal displays or were unknown.

Applicant is respectfully reminded that the primary reference Escher teaches the use of

formula (II) wherein R^3 and R^4 are disclosed by DE-A 3,717,668 (column 2, lines 35-55)

immediately after *formula (I)*, as monomers from which electrically conductive polymers are

derived (column 2, lines 30-40), prefaced by the teaching of the use of electrically conductive

polymers in an orienting layer for a liquid crystal display (column 2, lines 5-15). Therefore

Escher does suggest that the polythiophenes disclosed in *formula (II)* could exhibit similar

properties as *formula (I)* when introduced into an orienting layer for a liquid crystal display

(column 2, lines 5-15). Escher is silent about whether or not polymers derived from *formula (II)*

did not function as orienting layers in liquid crystal displays or were unknown.

5.   Applicant argues that one skilled in the art would only look upon DE-A 3,717,668 to seek

information about the preparation, stability and electrical conductivity of the polymers.

Applicant is respectfully reminded that the primary reference Escher teaches the use of

formula (II) wherein R^3 and R^4 are disclosed by DE-A 3,717,668 (column 2, lines 35-55)

immediately after *formula (I)*, as monomers from which electrically conductive polymers are

derived (column 2, lines 30-40), prefaced by the teaching of the use of electrically conductive

polymers in an orienting layer for a liquid crystal display (column 2, lines 5-15). Therefore

Escher does suggest that the polythiophenes disclosed in *formula (II)* could exhibit similar

properties as *formula (I)* when introduced into an orienting layer for a liquid crystal display.

6.   Applicant argues that the options for the substituents in *formula (II)* of Escher cannot

have greater scope than those for *formula (I)* of Escher.

Applicant is again respectfully reminded that the disclosure by Escher of *formula (II)*

wherein R^3 and R^4 are disclosed by DE-A 3,717,668 (column 2, lines 35-55) immediately after

formula (I), as monomers from which electrically conductive polymers are derived (column 2,

lines 35-55), combined with the teaching of the use of electrically conductive polymers in an

orienting layer for a liquid crystal display (column 2, lines 5-15), is sufficient motivation for one

of ordinary skill in the art at the time the invention was made, to have used the alternate

polythiophene monomers disclosed by DE-A 3,717,668, as part of routine experimentation to

obtain the desired orienting layer for the desired display.

7.   Applicant argues that Escher teaches away from the use of *formula (II)* as an alternate to

formula (I) due to Escher opting for narrower definitions for R^1 and R^2 than for R^3 and R^4.

Applicant is respectfully reminded that Escher does not teach away from the use of

formula (II) as an alternate to *formula (I)*. Instead, Escher teaches *formula (II)* wherein R^3 and

R^4 are disclosed by DE-A 3,717,668 (column 2, lines 35-55) immediately after *formula (I)*, as

monomers from which electrically conductive polymers are derived (column 2, lines 30-35),

prefaced by the teaching of the use of electrically conductive polymers in an orienting layer for a

liquid crystal display (column 2, lines 5-15). Therefore Escher does not preclude one of ordinary

skill in the art at the time the invention was made, from having checked the alternate *formula (II)*

out for an alternate display requiring an electrically conductive polymer with alternate

parameters.

Any inquiry concerning this communication should be directed to Sow-Fun Hon whose

telephone number is (571)272-1492. The examiner can normally be reached Monday to Friday

from 10:00 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Harold Pyon, can be reached at (571)272-1498. The fax phone number for the

organization where this application or proceeding is assigned is (703)872-9306.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished

applications is available through Private PAIR only. For more information about the PAIR

system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR

system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Sow-Fun Hon

11/16/04

HAROLD PYON
SUPERVISORY PATENT EXAMINER
1772

11/17/04